

REMARKS/ARGUMENTS

The present Amendment amends claims 1, 4, 27, and 28. Upon entry of this Amendment, thirty-two (32) claims remain pending, of which claim 22 is independent. For two months of extension, Applicant expects a fee of \$245 to be due, which is being electronically paid with the submittal of this Amendment. For any other fees which are deemed necessary, the undersigned hereby authorizes such fees to be charged to our deposit account, Deposit Account No. 061910.

Prior Response filed on August 15, 2008

Applicant filed a response to Restriction Requirement on August 15, 2008 in the instant application. In the "Amendments to the Claims" section of that response, all the claims were listed as "Original" except for Claims 1, 8, and 16, which were listed as "Currently Amended" and had amendments made thereto. However, each of claims 1, 3-6, 8, 11, 12, 14, 15, 17-22, 25-26, 28, 29, 31, and 32 had been previously amended in a Preliminary Amendment filed along with the instant application on October 11, 2005. Accordingly, in this Amendment, if not otherwise amended by this Amendment, these same claims now are listed as "Previously Presented". Applicant apologizes for any confusion the claim categorizing may have caused in its prior response.

Election/Restrictions and Information Disclosure Statement

Applicant respectfully thanks Examiner for reconsidering the restriction of claims 1-32, and for proceeding with full examination of the claims based on the amendments made to claim 1. Applicant also respectfully thanks Examiner for his attention to the references disclosed in the instant application, and correction made to certain of the references that had been listed.

§112, Second Paragraph Rejections

Examiner objects to claim 4 because of lack of antecedent basis with respect to "the same pipe". Applicant hereby amends claim 4, replacing "the same pipe" with "a same pipe". Accordingly, Applicant respectfully asserts the rejection has been overcome, and respectfully requests Examiner to withdraw the rejection.

§102(b) and §103(a) Rejections and Applicant's Response

Claims 22-27 and 29-32 currently stand rejected under 35 U.S.C. 102(b) as being anticipated by Kai (JP 2004-063779) {equivalent US 2004/0144323 and used hereinafter}. In addition, under 35 U.S.C. 103(a), claim 28 stands rejected as being unpatentable over Kai, and claims 1-21 stand rejected as being unpatentable over Kai as applied to claims 22-27 and 29-32, in view of Bhat (US 5,226,383). Applicant respectfully traverses the pending 102(b) and 103(a) rejections and respectfully requests Examiner to reconsider his rejections.

Regarding the features of the support system of claim 1, it appears an error was made in the last paragraph as the "one or more passages for one or more of the gas flows" had been linked to "the support element". However, the support element (20) has no passages, but instead the support system (1), and more particularly, the base element (10), comprises such passages (12). Support for this can be found, for example, in paragraph [0033] of Applicant's published application. Accordingly, claim 1 is hereby amended, linking the "one or more passages" to the "support system" instead of the support element.

Certain embodiments of Applicant's invention involve providing a rotating support system for a treatment apparatus using a fixed base element which is provided with a substantially cylindrical seat, housing a movable substantially disc-shaped support element inside the seat, and using one or more inclined gas flows both in order to lift the support system and in order to cause rotation thereof. Support for this can be found, for example, in claims 1 and 22, and paragraphs [0015], [0017], and [0019] of Applicant's published application.

In the current rejections, Examiner is using Kai as the primary reference. Following a careful review of Kai, Applicant finds teaching of a susceptor comprising notches in a rear part acting as passages for the gas flow. By merely comparing the figures of Kai and the instant application, the skilled artisan may judge their solutions as alike; however, when a proper study is carried out, it seems apparent that relevant differences exist, both from a structural point of view and in regard to the technical problems faced and solved in the instant application. In short, Applicant respectfully asserts that the principle on which Kai is based is opposite of that considered with Applicant's embodied invention.

Particularly, in the solution taught by Kai, the susceptor (4) is rotated through a shaft (14) and a rotary drive mechanism (not shown in its figures). This is explained, for example, in

paragraphs [0052] and [0053] of Kai. As such, the susceptor is not intended to be lifted and rotated via gas flows. Instead, the gas flows (b and c in Figs. 3-6, 8, 9, 14, and 17) drawn from below the susceptor (4) are used to remove dopants from the space below the wafer in the wafer pocket (13). This is explained, for example, in paragraphs [0074] and [0076] of Kai. Thus, upon reviewing Kai, the skilled artisan would appreciate the gas flows are not used to lift and rotate the susceptor.

To this point, upon further review of Kai, Applicant finds it teaches notches (25 and 26 in Fig. 4, 27 and 28 in Fig. 8) in the susceptor (4), which are used as inlets and outlets for gas flows. This is explained, for example, in paragraphs [0071] and [0074]. However, these notches are not shaped to *receive the thrust* of gas flows, as required by claim 22, but instead are shaped to *serve as conduits* in routing the gas flows into and out of the wafer pocket of the susceptor (see Fig. 7 and Fig. 12). This is also exhibited in Figs. 3 and 8.

Claim 22 of the instant application requires depressed areas (22) on the bottom side of the support element to be shaped to receive the thrust of gas flows. Support for such feature is found, for example, in paragraphs [0082], [0087], and [0088] of Applicant's published application, wherein Applicant describes such depressed areas being shaped so that the thrust exerted thereon by the gas flows emerging from the passages (12) is converted into rotation of the element (20). Thus, from Applicant's specification, there is little doubt as to the meaning intended in claiming that the depressed areas are shaped to *receive the thrust of gas flows*. To the contrary, as explained above, the notches (25, 26 or 27, 28) of Kai fail to receive such thrust of the gas flows, but instead merely serve *as a conduit for the gas flows*.

To be perfectly clear, while the notches of Kai may indeed receive gas flows, this is not what is required in Claim 22. Instead, claim 22 requires depressed areas to be shaped to receive *the thrust* of gas flows, which Kai is deficient in teaching. Accordingly, for at least this reason, Kai fails to anticipate the features of claim 22, and the corresponding 102(b) rejection should be withdrawn.

In addition to the above deficiency, it should be noted that claim 22 requires the *bottom side* of the support element being provided with depressed areas shaped to receive the thrust of gas flows. Locating the depressed areas on the bottom side of the support element 20 *combined* with the depressed areas being shaped to receive the thrust of the gas flows enables the rotational movement of the support element to be gradually accelerated, thereby eliminating the substrates

or wafers carried on top of the element from being disturbed (see, e.g., paragraph [0067] of Applicant's published application for support). Such feature is further found to be deficient from the teaching of Kai.

Further, with reference to paragraphs [0055], [0088], [0090], [0095] and with reference to Fig. 6 of Applicant's published application, it is further taught how an edge of the depressed areas is positioned and/or shaped so that gas flows exert a thrust thereon. Claims 29-31 are specifically focused on this relationship between edge and depressed areas. However, these claims are further rejected under 102(b) as being anticipated by Kai. In light of the Applicant's description (i.e., the above-referenced paragraphs, as well as others), Applicant respectfully requests Examiner to reconsider the meaning of these claims in his further examination.

Looking to the other reference cited, Bhat, it is cited by Examiner for its teaching of (i) a fixed base element having a substantially flat surface in which a substantially cylindrical seat with a substantially flat bottom is formed, (ii) a disc-shaped support element being housed inside the seat and being able to rotate about the axis of the seat, and (iii) wherein gas passages of the support element emerge inside the seat in directions which are incline and preferably skew with respect to seat axis, in such a way as to lift and rotate the support element. As described above with respect to amendment made to claim 1, the support element has no passages, but instead the support system, and more particularly, the base element, comprises such passages. In light of the above reasons provided by Examiner for citing Bhat, the reference fails to address the deficiencies described herein with respect to Kai.

In light of the above, Applicant asserts that upon entry of this Amendment, the claims are hereby in condition for allowance. For the above reasons, Applicant believes claims 22 should be allowed. In turn, the allowance of claim 22 thereby renders claims 1-21 and 23-32 also allowable. Favorable consideration and prompt allowance of the application are respectfully requested.


Conclusion

Applicant believes that no new matter will be introduced by entry of these amendments and that the amendments are fully supported by the specification and application as a whole. Applicant has amended the claims solely to advance prosecution of this application and to obtain the allowance of claims at the earliest possible date. No admission should be inferred by these amendments. Applicant reserves the right to prosecute the originally filed claims in a continuation application.

In light of the above, Applicant respectfully submits that the present rejections should be withdrawn and prompt allowance of this application is respectfully requested. If the Examiner feels that prosecution of the present application can be materially advanced by a telephonic interview, the undersigned would welcome a call at the number listed below.

Respectfully submitted,

Dated: APRIL 7, 2009



John S. Parzych
Reg. No. 52,097
(612) 492-7279

Fredrikson & Byron, P.A.
200 South Sixth Street, Suite 4000
Minneapolis, MN 55402-1425 USA
Facsimile: (612) 492-7077

4520474_doc